

Grain Sorghum

12-06-05 (05-5B)

Southern Illinois University

Herbicide Evaluations in Sorghum.

Project Code: 05-5B Location: Belleville Research Center
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final Updated: 11-18-05

Objective:

Evaluate Degree Xtra and Paramount for crop response and weed control in sorghum.

Weed Code	Common Name	Scientific Name
1. SETFA	foxtail, giant	Setaria faberi Herrm.
2. ABUTH	velvetleaf	Abutilon theophrasti Medicus

Crop 1:	SORVU sorghum	Variety:	Pioneer 85G85
Planting Method:	Seeded	Planting Date:	5-16-05
Rate:	9 lb/A	Depth:	1.0 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	27 FT	Reps:	4
Tillage Type:	Conventional-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2004				

Field Prep./Maintenance: N 150 LB/A, P205 50 LB/A, K20 150 LB/A

Soil Name:	Stoy	% OM:	1.6	pH:	6.1	CEC:	7
Texture:	Silt loam	Fert. Level:	P1: 93 LB/A, K: 429 LB/A				

APPLICATION DESCRIPTION

	A	B
Application Date:	05-17-05	05-27-05
Time of Day:	11:00	9:30
Application Method:	Spray	Spray
Application Timing:	PRE	1"W
Applic. Placement:	BROSOI	BROFOL
Air Temp., Unit:	70 F	75 F
% Relative Humidity:	34	36
Wind Velocity, Unit:	8 MPH	10 MPH
Soil Moisture:	NORMAL	NORMAL

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	SORVU NA	SORVU V2
Height, Unit:	NA NA	3-4 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:		SETFA
Stage (leaves):		1-2
Height (inches):		0.5-1
Density:		High
Weed 2 Code:		ABUTH
Stage (leaves):		0-2
Height (inches):		0.5-1
Density:		High

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8003	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA

NOTES:

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	SORVU	SORVU	SORVU	SORVU	SETFA	SETFA	SETFA	SETFA	
																GRORED Percent	STARED Percent	Injury Percent	Injury Percent	Control Percent	Control Percent	Control Percent	Control Percent	
																05-30-05	05-30-05	05-30-05	06-10-05	05-31-05	06-10-05	06-24-05	10-10-05	
																13 DA-A	14 DAP	14 DAP	14 DA-B	14 DA-A	14 DA-B	28 DA-B	EOS	
1	DEGREE XTRA	4 L	2.9 lb ai/a	2.9 qt/a	PRE A	0	0	0	0	99	84	78	78											
2	DEGREE XTRA	4 L	2.18 lb ai/a	2.18 qt/a	PRE A	0	0	0	0	98	74	68	68											
3	MICROTECH	4 ME	1.75 lb ai/a	1.75 qt/a	PRE A	0	0	0	0	99	79	70	70											
3	AATREX	90 WG	1.0 lb ai/a	1.11 lb/a	PRE A																			
4	MICROTECH	4 ME	1.31 lb ai/a	1.31 qt/a	PRE A	0	0	0	0	99	82	79	79											
4	AATREX	90 WG	1.0 lb ai/a	1.11 lb/a	PRE A																			
5	BICEP II MAGNUM	5.5 L	2.2 lb ai/a	1.6 qt/a	PRE A	0	0	0	0	99	77	79	79											
6	BICEP II MAGNUM	5.5 L	1.65 lb ai/a	1.2 qt/a	PRE A	0	0	0	0	98	71	69	69											
7	BULLET	4 SC	2.75 lb ai/a	2.75 qt/a	PRE A	0	0	0	0	99	83	76	76											
8	BULLET	4 SC	2.06 lb ai/a	2.06 qt/a	PRE A	0	0	0	0	98	74	68	68											
9	NONTREATED					0	0	0	0	0	0	0	0											
10	PARAMOUNT	75 WG	0.248 lb ai/a	5.3 oz/a	1"W B	6	0	6	1	92	68	58	58											
10	DESTINY MSO	100 LIQ	1.0 % v/v	1 % v/v	1"W B																			
11	PARAMOUNT	75 WG	0.375 lb ai/a	8 oz/a	1"W B	7	0	7	0	95	71	63	63											
11	DESTINY MSO	100 LIQ	1.0 % v/v	1 % v/v	1"W B																			
12	PARAMOUNT	75 WG	0.248 lb ai/a	5.3 oz/a	1"W B	6	0	6	0	98	82	71	71											
12	AATREX	90 WG	1.0 lb ai/a	1.11 lb/a	1"W B																			
12	DESTINY MSO	100 LIQ	1.0 % v/v	1 % v/v	1"W B																			
13	PARAMOUNT	75 WG	0.375 lb ai/a	8 oz/a	1"W B	6	0	6	0	98	86	75	75											
13	AATREX	90 WG	1.0 lb ai/a	1.11 lb/a	1"W B																			
13	DESTINY MSO	100 LIQ	1.0 % v/v	1 % v/v	1"W B																			
LSD (P=.05)																0.8	0.0	0.8	1.0	2.0	9.7	10.6	10.6	
Replicate F																0.835	0.000	0.835	1.000	2.201	0.756	1.075	1.075	
Replicate Prob(F)																0.4833	1.0000	0.4833	0.4040	0.1048	0.5261	0.3718	0.3718	
Treatment F																95.051	0.000	95.051	1.000	1478.240	43.312	30.965	30.965	
Treatment Prob(F)																0.0001	1.0000	0.0001	0.4685	0.0001	0.0001	0.0001	0.0001	

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Weed Code	ABUTH	ABUTH	ABUTH	ABUTH
Crop Code				
Rating Data Type	Control	Control	Control	Control
Rating Unit	Percent	Percent	Percent	Percent
Rating Date	05-31-05	06-10-05	06-24-05	10-10-05
Trt-Eval Interval	14 DA-A	14 DA-B	28 DA-B	EOS

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code				
1	DEGREE XTRA	4	L	2.9	lb ai/a	2.9	qt/a	PRE	A	84	73	45	45
2	DEGREE XTRA	4	L	2.18	lb ai/a	2.18	qt/a	PRE	A	66	66	36	36
3	MICROTECH	4	ME	1.75	lb ai/a	1.75	qt/a	PRE	A	92	70	36	36
3	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	A				
4	MICROTECH	4	ME	1.31	lb ai/a	1.31	qt/a	PRE	A	98	75	36	36
4	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	PRE	A				
5	BICEP II MAGNUM	5.5	L	2.2	lb ai/a	1.6	qt/a	PRE	A	93	75	38	38
6	BICEP II MAGNUM	5.5	L	1.65	lb ai/a	1.2	qt/a	PRE	A	93	66	38	38
7	BULLET	4	SC	2.75	lb ai/a	2.75	qt/a	PRE	A	96	74	44	44
8	BULLET	4	SC	2.06	lb ai/a	2.06	qt/a	PRE	A	75	55	29	29
9	NONTREATED									0	0	0	0
10	PARAMOUNT	75	WG	0.248	lb ai/a	5.3	oz/a	1"W	B	85	81	66	66
10	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	1"W	B				
11	PARAMOUNT	75	WG	0.375	lb ai/a	8	oz/a	1"W	B	80	83	69	69
11	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	1"W	B				
12	PARAMOUNT	75	WG	0.248	lb ai/a	5.3	oz/a	1"W	B	97	96	84	84
12	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	1"W	B				
12	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	1"W	B				
13	PARAMOUNT	75	WG	0.375	lb ai/a	8	oz/a	1"W	B	97	96	83	83
13	AATREX	90	WG	1.0	lb ai/a	1.11	lb/a	1"W	B				
13	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	1"W	B				
LSD (P=.05)										14.8	11.7	12.0	12.0
Replicate F										0.120	0.596	2.684	2.684
Replicate Prob(F)										0.9476	0.6217	0.0612	0.0612
Treatment F										25.491	33.874	30.696	30.696
Treatment Prob(F)										0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: Monsanto, BASF.
2. Ratings: CI (growth reduction, stand reduction, overall injury) at 14 DAP.
WC 14 and 28 DAT and at harvest.
3. Yield (destroy grain from plots with acetochlor).
4. GRORED = Growth reduction. STARED = Stand reduction. DAP = Days after planting. DA-A = Days after PRE application.
DA-B = Days after 1"W application. EOS = End of season.
5. Not harvested.